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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/037,250      | 01/07/2002  | Mohammad Haghgoie    | 201-0662            | 6162             |

7590 11/20/2003

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EXAMINER

PHAM, THOMAS K

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2121

6

DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

KS

# Office Action Summary

Application No.

10/037,250

Applicant(s)

HAGHGOOIE ET AL.

Examiner

Thomas K Pham

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

*Notice to Applicant(s)*

1. Claims 1-18 of U.S. Application 10/037250 filed on 01/07/2002 are presented for examination.

**DETAILED ACTION**

*Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giavi et al. U.S. Patent no. 6,494,187 (hereinafter Giavi) in view of Pusic U.S. Patent no. 5,074,259.

**Regarding claims 1, 7 and 14**

Giavi teaches controlling an electromechanical valve assembly, said valve assembly having a first solenoid, a second solenoid and an valve armature positioned between said first solenoid and said second solenoid (col. 3 lines 29-40, "The control valve 10 ... left hand limit position") comprising: changing a voltage applied to said first solenoid (col. 3 lines 44-56, "In order to open ... to the magnetic hysteresis"); measuring an induced current in said first solenoid (col. 4 lines 16-23, "FIG. 2, in the ... of the control valve") ; and, holding said voltage at said second polarity for a predetermined time period at a predetermined amplitude to decrease said induced current, said predetermined time period or said predetermined amplitude being determined based on said induced current (col. 4 lines 50-66, "Time  $t_2$  defines ... can be precisely compensated")

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but does not teach a first polarity and a second polarity. However, Pusic teaches a first polarity and a second polarity (col. 3 lines 24-49, "when an electrical current ... is repelled downwards"). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the polarities of Pusic with the electromagnetic valve of Giavi because it would provide for operating the electromagnetic valve by switching between a positive magnetic field and negative (or reverse) magnetic field.

**Regarding claims 2, 8 and 15**

Giavi teaches increasing said first predetermined time period when said induced current has a positive value (col. 4 lines 60-66, "the delay times ... can be precisely compensated").

**Regarding claims 3, 9 and 16**

Giavi teaches increasing said predetermined amplitude when said induced current has a positive value (col. 4 lines 24-38, "In the lower part ... right-hand limit position").

**Regarding claims 4, 10 and 17**

Giavi teaches decreasing said first predetermined time period when said current has a negative value (col. 4 lines 60-66, "the delay times ... can be precisely compensated").

**Regarding claims 5, 11 and 18**

Giavi teaches decreasing said predetermined amplitude when said current has a negative value (col. 4 lines 24-38, "In the lower part ... right-hand limit position").

**Regarding claims 6 and 12**

Pusic teaches first polarity is a positive polarity and said second polarity is a negative polarity (col. 3 lines 53-59, "It is to be understood ... in this description").

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**Regarding claim 13**

Giavi teaches controller generates a release command to change the voltage (col. 2 lines 43-45, "The method according ... electronic engine controller").

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (703) 305-7587 and fax number is (703) 746-8874, Monday-Thursday and every other Friday from 7:30AM- 5:00PM EST or contact Supervisor *Mr. Anil Khatri* at (703) 305-0282.

Any response to this office action should be mailed to: **Director of Patents and Trademarks Washington, D.C. 20231**, or **Hand-delivered** responses should be brought to **Crystal Park II, 2121 Crystal Drive Arlington, Virginia, (Receptionist located on the 4th floor)**, or fax to the **official fax number (703) 872- 9306**.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

**Thomas Pham**  
*Patent Examiner*

*T.P*

November 17, 2003

*Ramesh Patel*  
RAMESH PATEL  
PRIMARY EXAMINER  
*For Anil Khatri*  
11/17/03